In the Claims:

Please cancel claims 13 to 15 without prejudice and amend claims 9 to 12 and 16 to 19 as follows:

Claims 1 to 8 (canceled).

9(currently amended). A measuring probe (1) for detecting agents in a gaseous and/or liquid medium and/or for measuring concentrations of said agents in said gaseous and/or liquid medium, said measuring probe comprising

a sensor-active solid layer (4) which reacts to adsorption of agent molecules from a gas or liquid containing the agent molecules by changing electrical properties of the sensor-active solid layer (4);

a liquid covering film (7) on said sensor-active solid layer (4) formed from said gas or ~~consisting of a~~ liquid , said liquid covering film (7) being arranged between said ~~gaseous medium~~ gas or liquid and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4); and

a plurality of electrodes (2) arranged in contact with said sensor-active solid layer (4) for electrical measurement of changes in said electrical properties of said sensor-active solid layer due to presence of said ~~agents in said gaseous medium~~ agent molecules in said gas or liquid.

10(previously added). The measuring probe (1) as defined in claim 9, wherein said sensor-active solid layer (4) consists of an organic semiconductor polymer.

11(currently amended). The measuring probe (1) as defined in claim 9, wherein said covering film (7) consists of water and said gas is a mixture of air and water vapor ~~gaseous medium contains water vapor~~.

12(previously added). The measuring probe (1) as defined in claim 9, further comprising means for electrical connection to a control circuit of a semiconductor component.

Claims 13 to 15 (currently canceled).

16(currently amended). An array of measuring probes having predetermined geometrical dimensions and electrode structures, said electrode structures comprising electrodes made of different substances, wherein at least two of said measuring probes each comprise a sensor-active solid layer (4) which reacts to adsorption of agent molecules from a gas or liquid containing the agent molecules by changing electrical properties of the sensor-active solid layer (4); a liquid covering film (7) ~~consisting of a liquid, said covering film (7) being~~ arranged between said gas or liquid ~~a gaseous or liquid medium containing agents~~ and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4), said liquid covering film (7) being formed from said gas or liquid; and a plurality of said electrodes (2) arranged in contact with said sensor-active solid layer (4) for electrical measurement of changes in said electrical properties of the sensor-

active solid layer (4) due to presence of said agent molecules in said gas or liquid ~~agents in said gaseous or liquid medium~~.

17(previously added). The array as defined in claim 16, further comprising measurement means for measuring differing physical parameters.

18(currently amended). A measurement procedure for detecting agents in a gaseous or liquid medium and/or measuring concentrations of said agents in said gaseous or liquid medium, said procedure comprising the steps of:

a) providing a measuring probe comprising a sensor-active solid layer (4) which reacts to adsorption of agent molecules from a gas or liquid containing the agent molecules by changing electrical properties of the sensor-active solid layer (4); a liquid covering film (7) ~~consisting of a liquid, said covering film (7) being~~ arranged between said gas or liquid ~~gaseous or liquid medium~~ and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4), said liquid covering film (7) being formed from said gas or liquid; and a plurality of said electrodes (2) arranged in contact with said sensor-active solid layer (4) for measuring electrical conductance changes due to presence of said agent molecules in said gas or liquid ~~agents in said gaseous or liquid medium~~;

b) doping a surface of the measuring probe (1) reversibly with said agent molecules by adsorbing said agent molecules on said surface ~~agents~~, so that an active surface is formed, whereby said electrical conductance changes due to the presence of said agent molecules in said gas or liquid ~~agents in said gaseous or~~

~~liquid medium~~ occur;

c) measuring said electrical conductance changes ~~due to the presence of said agents~~ with the measuring probe provided in step a), wherein total electrical conductance measured by the measuring probe comprises partial conductances of the solid layer (4), the liquid covering film (7), the active surface (8) and the gas or liquid ~~gaseous or liquid medium~~, without compensation; and

d) after prior calibration, determining the ~~said~~ agents and/or the ~~said~~ concentrations of the ~~said~~ agents from said electrical conductance changes measured with said measuring probe.

19(previously added). The measurement procedure as defined in claim 18, further comprising transmitting measurement results of said measuring over EDP networks and/or by telecommunications devices to authorized recipients.

In the Abstract:

Please make the following changes in the abstract filed in previous amendment filed on or about August 1, 2003:

ABSTRACT OF THE DISCLOSURE

The measuring probe (1) for detecting agents in a gaseous or liquid medium and/or measuring their concentrations includes a sensor-active solid layer (4) that reacts to adsorption of an agent from a gas or liquid by changing its electrical properties; a liquid covering film (7) formed from the gas or liquid ~~consisting of a liquid~~, such as a water film, which covers the sensor-active solid layer (4), and a plurality of electrodes (2) arranged in electrical contact with the sensor-active solid layer (4) for electrical measurement of conductivity changes due to presence of the agents in the gas or liquid ~~gaseous or liquid medium~~. According to the measurement procedure of the invention, the measuring probe surface is doped reversibly by adsorption with the agents to form an active surface that influences the measured electrical conductance and the electrical conductance is measured. Various measured partial conductances, in particular, of the solid layer (4), the liquid covering film (7) and the active surface (8) formed between both of these, are included in the total conductance without compensation.

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